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HOW TONALITY FUNCTIONS IN SCHOENBERG'S OPUS 11, NUMBER 1

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This is not the first investigation of tonality in the Opus 11 of Arnold Schoenberg nor is it likely to be the last. To my own knowledge, Hugo Leichtentritt was the first to explore the tonal basis of Opus 11 which he did in the third edition of his book on Musical Form (1927). Perhaps the most positive exponent of tonal analysis has been Reinhold Brinkmann in his Arnold Schönberg: Drei Klavierstücke: Studien zur Frühen Atonalität bei Schoenberg (1969). The competition among those willing to venture diverse opinions on the tonality of Opus 11 is lively, to say the least, while the scornful, led by George Perle and Alan Forte, offer motivic and set analysis in the place of tonal interpretation.

I intend to offer something to this literature since I am convinced that tonality not only exists but that it functions structurally in Opus 11. In fact, there is evidence that tonality functions in Opus 23, No. 1 some dozen years later. I have also found it irritating when reputable musicians don't understand simple thematic structuring in Opus 11, No. 1 even though they concern themselves with intense intervallic analysis. It is also irritating to read the work of reputable theorists who do not bother to discuss structural relations and functioning in Opus 11 even though they abstract various note sets. In both cases, partial understanding results and, it seems to me, a less significant understanding than a consideration of tonal structuring would provide.

Arnold Schoenberg's Opus 11, No. 1 is based on a traditional conception of a tonal movement: an exposition that establishes a prime tonal region but introduces a rival region before moving on to a central development that loosens tonal ties to competing tonalities by means of roving harmonies although preparing for the return of the principal tonal centers in the recapitulation.

Schoenberg's exposition is defined by a classically structured theme, articulated into balanced segments that imply the structure of a parallel period. This parallel period presents a model which, together with the twice repeating contrasting phrase that follows, forms the antecedent (mm. 1-8). The consequent's model is not followed by the expected contrasting phrase, or a cadential phrase, but by an episode which, during its course, is transformed again into the consequent's first phrase. The consequent then proceeds to close out the extended thematic structure with the expected contrasting phrase.

The entire antecedent establishes the tonic region of G. The consequent repeats the model but in a dominant form. The episode establishes the competing tonality of E \flat , but in its minor mode and not so chordally. The resumption of the consequent begins in G but its contrasting phrase closes in the rival region of the \flat submediant, E \flat , this time major.

Other interpretations of the form of this exposition are possible, of course. The theme could be regarded as a three-phrase group, closing with the first phrase of the consequent. The cadential properties of this phrase would admit such an interpretation since it prepares tonally for the E \flat of the episode. Such an interpretation would explain away the unusual feature of repeating the first phrase of the consequent following the episode and allow the episode to be viewed as the beginning of a B part, functioning something like a rounded binary form.

My preferred description of the form of these twenty-four measures is the first since that interpretation allows a more convincing explanation of the structure that follows the theme and precedes the development (mm. 25–33). This intermediary structure performs the normal post-thematic function of intensifying the use of the model and other motives through strettoed imitations.

2

Schoenberg crafted a closely reasoned tonal structure for the theme of Opus 11, No. 1. G is the prime tonal axis, firmly established in the antecedent of the theme, contested in the episode, and then re-established and contested again in the consequent through both harmonic and melodic means. To demonstrate this harmonic and melodic tonality, a combination of Roman and Arabic numbering can be used. The latter will describe tonal pitch placement while the former will indicate harmonic function when useful. The Arabic numbering recognizes multiple scale degrees but based on seven rather than twelve degrees:

G	G \sharp	A \flat	A	A \sharp	B \flat	B	C	C \sharp	D \flat	D	D \sharp	E \flat	E	F	F \sharp	G \flat
1	\sharp 1	\flat 2	2	\sharp 2	-3	+3	4	\sharp 4	\flat 5	5	\sharp 5	-6	+6	7	\sharp 7	\flat 1

These seven degrees and their alterations will express voice leading as well as tonal degrees.

3

Schoenberg himself suggested an enlarging of degrees in his *Theory of Harmony*. Each of his seven notated degrees are supplemented by their sharp and flat alterations allowing twenty-one scale degrees. Schoenberg does not invest any functions, numerical or other, in these twenty-one degrees although, by suggesting a seven degree notation base, Schoenberg does allow chromatic alteration to *not* be excluded. Schoenberg, however, explains away his inherited dependence on chromatic alteration by asserting the need for a twelve-degree base rather than a seven.

It is my belief that a twelve-note base cannot adequately explain voice leadings and harmonic functioning in Opus 11. Since Schoenberg admittedly relies upon the principle of the simplest notation rather than on a derivation or function principle, reading G \sharp rather than A \flat in measure 1, D \flat in measure 3, and especially B \flat in the alto voice of measure 4 confuses rather than clarifies both voice leading and harmonic functioning. A notated A \flat , the flattened second degree, clarifies the tonal priority of G in measure 2 while C \sharp in the alto of measure 3, as \sharp 4, clarifies the appoggiatura relationship of F to E in the melody as well as the A dominant ninth, half cadence in measure 3. Finally, A \sharp , as \sharp 2 is appropriate to clarifying B as the supporting +3 of the tonic G in measure 4. F \sharp rather than G \flat in the bass of measure 2 would be tonally preferable, although melodically less diatonic, and the presence of two forms of the same degree, F \sharp and F, in more dissonant music should be easily acceptable.

For purposes of a tonal description of the model (Example 1), this particular degree numbering seems quite useful. Reading augmented second intervals and diminished fourths is not particularly pleasant, nor even necessary for performers, but the tonal condition of both the model and the contrasting phrases forming the antecedent is clarified by the revised notation (Examples 1 and 2). The arrows in these examples point to harmonic roots.

Ex. 1

When harmonic progression involves tonal material only secondarily related to the prime tonal center, one can expect a numbering based on the prime tonic to lose its immediate communicability. The third measure of Opus 11 is a case in point: To interpret the melody as 7 6 is informative: to call attention to C# as #4 reminds that if the fourth degree is raised, a major third and a leading tone are present; but C# as the #7 of D is not immediately described, only implied for harmony aware persons. Such numbering, however, can be used on three levels of information: 1) pitch relationship to the given chord root (Example 2),

Ex. 2

A musical staff showing a chord with intervals -6 and 5. The root is A9. The notes are G#3, A1, and Bb2.

2) pitch relationship to the momentary tonic or tonal region (Example 3),

Ex. 3

A musical staff showing a chord with intervals -3 and 2. The root is V9 of d. The notes are G#7, A5, and Bb6.

and 3) pitch relationship to the prime tonal center, should one exist as it does in Opus 11 No. 1 (see Example 1).

4

A word or two is in order about Schoenberg's ingenious tonal cadence which, in its threefold employment, forms the contrasting phrase to the model and completes the antecedent. This type of cadence can be called a "Cubist" cadence. It is not a polytonal cadence but an extension of the V-I cadence over the tonic pedal favored by Beethoven: the ii proceeds to I in the soprano and alto voices; the 5 of I is also the root of the arpeggiated V which resolves to the +3 of I; and the N is the pedal tone underlying V-I. Such a

cadence is ingenious but not unique in Schoenberg's music of this period (Example 4).

Ex. 4

A musical staff showing a cadence with intervals +6, 1, +3, #7, #2, +3. The harmonic progression is IV or II to I. The notes are G#2, A1, and Bb2.

The consequent's model presents a somewhat similar cadence but, this time, the cadence serves two tonal centers at the same time. The cadence of bar 11 resolves the V7 of g at the same time that it provides a half cadence to the eb tonal center controlling the episode (Ex. 5).

Ex. 5

A musical staff showing a cadence with intervals #7, 5, 4, #1, 2, -3. The harmonic progression is g: V to Eb: IV, II, V (upper chord half). The notes are G#7, A5, Bb4, C#1, D2, and Eb3.

The active tonal link between g and eb is Ab, the b2 of g and the 4 of eb. The bifocal harmonic function of the single harmony of measure 10 is critical for it expresses the subdominant of eb through Ab and C with Gb leading to F, the 5 of V. At the same time, Ab, as the N of g or the b5 of the altered V9 in g, supports that tonic. The notated Gb is also F# in this context, the leading tone which resolves directly in the bass to G.

eb is expressed melodically in the opening model of the episode, although a harmonic progression from I to III is also implied (Ex. 6).

Ex. 6

Two musical staves labeled a) and b). Staff a) shows a harmonic progression from I to III. Staff b) shows a harmonic progression from I to III. The notes are G#2, A1, and Bb2.

The contrasting phrase, following the model, continues to favor E_b as a tonal accent but the tonic G is not very far away, being harmonically expressed in the middle of this phrase (Ex. 7):

Ex. 7

A musical score for piano, labeled Ex. 7. It consists of two staves: a treble clef staff and a bass clef staff. The music is in G major. The treble staff features a melodic line with eighth and sixteenth notes. The bass staff features a harmonic accompaniment with chords and moving lines. There are several arrows pointing to specific notes in the bass staff, indicating harmonic shifts or accents.

The interruptive piano harmonic that separates this episodic material from the reviving thematic model of the consequent lies midway between the two competing tone centers, perhaps better understood harmonically as a pivot by means of the circle of fifths (Ex. 8):

Ex. 8

A musical score for piano, labeled Ex. 8. It consists of two staves: a treble clef staff and a bass clef staff. The music is in G major. The treble staff features a melodic line with eighth and sixteenth notes. The bass staff features a harmonic accompaniment with chords and moving lines. There are several arrows pointing to specific notes in the bass staff, indicating harmonic shifts or accents.

(harm.)

a) $G: \flat VII$
 $E_b: \sharp$
E

b) $E_b \leftarrow \flat VII \rightarrow G:$
 $\rightarrow II$

Although the model of the revived consequent restates the altered V of g , its cadence is deflected downward deceptively to a reinforced subdominant function of E_b . At first, the contrasting cadential phrase seems rooted in A_b by direct transposition but by its second repetition, E_b is revealed as the real tonal center (Ex. 9):

Ex. 9

A musical score for piano, labeled Ex. 9. It consists of two staves: a treble clef staff and a bass clef staff. The music is in E-flat major. The treble staff features a melodic line with eighth and sixteenth notes. The bass staff features a harmonic accompaniment with chords and moving lines. There are several arrows pointing to specific notes in the bass staff, indicating harmonic shifts or accents.

$E_b: \sharp (V \text{ of } V)$ V $IV (\flat VI)$ I IV $E_b: V$ I I IV V $(\flat VI)$

Again Schoenberg indulges his cubist cadence (measure 24), this time expressing the tonic, subdominant (or \flat submediant, if you will), and the dominant in the three voice planes of the cadence's texture.

5

In his *Theory of Harmony* Schoenberg speaks briefly of "schwebende" and "aufgehoben" tonality, terms which the translator, Roy Carter, translates as "fluctuating" and "suspended" tonality. Carter points out, however, that Schoenberg in *Structural Functions of Harmony* explicitly translates "schwebende" as "suspended." Carter believes that what Schoenberg calls "roving harmony" in *Structural Functions* identifies with "aufgehoben tonalität" in the *Theory of Harmony*.

A "schwebende Tonalität" is ambiguous, fluctuating between at least two keys or tonal centers. Although Schoenberg finds this condition as early as Beethoven, he offers an analysis of his own song, "Lockung," Opus 6, No. 6 as demonstration. The fluctuation is between c and E_b , two closely related keys. Schoenberg points out that "Lockung" "expresses an E_b tonality without once in the course of the piece giving an E_b major triad in such a way that one could regard it as a pure tonic." "Aufgehoben Tonalität" suspends the tonality in the sense of giving it up, at least momentarily. In his *Theory of Harmony*, Schoenberg suggests that even "classical development sections are not too far removed from this."

Although one might conclude that the bridging section between the theme and its development in Opus 11, No. 1 is either "schwebende" or "aufgehoben" or both, a close look convinces one that the intermediary section moves from e_b back to g through the minor subdominant, the c of measure 23, and includes a rather strong $ii-V-I$ cadence in g (mm. 29-32).

The central part of the piece, a far ranging harmonic development, could perhaps be called "aufgehoben" in the sense of Schoenberg's roving harmony. Although the details of Schoenberg's harmonic progressions constitute roving harmony by their conjunct relating of remote degrees, phrase endings remain remarkably directed, tonally. For example, the first and second phrase endings of this development are related to each other as V to I in G (Ex. 10):

Ex. 10a

A musical score for piano, labeled Ex. 10a. It consists of two staves: a treble clef staff and a bass clef staff. The music is in G major. The treble staff features a melodic line with eighth and sixteenth notes. The bass staff features a harmonic accompaniment with chords and moving lines. There are several arrows pointing to specific notes in the bass staff, indicating harmonic shifts or accents.

$\sharp 5$
 $\sharp 3$
 $\flat 3$
 $\flat 4$
 $\flat 4$
5

Ex. 10b

A musical score for piano, labeled Ex. 10b. It consists of two staves: a treble clef staff and a bass clef staff. The music is in G major. The treble staff features a melodic line with eighth and sixteenth notes. The bass staff features a harmonic accompaniment with chords and moving lines. There are several arrows pointing to specific notes in the bass staff, indicating harmonic shifts or accents.

$\flat 2$
 $\flat 4$
 $\flat 4$
 $\sharp 7$
 $\sharp 7$
1
 $\flat 2$

G: N V I

The penultimate phrase of this development section is followed by a N-V7 half cadence, confirming a remarkable sense of tonal structuring on the part of Schoenberg (Ex. 11):

Ex. 11
a) $\sharp 1$ 2 -6 1 2
G: ii_9

Ex. 11
b) $\flat 5$ 4
G: IV V \flat VI V_7

Even the short accelerando (mm 49–50) interpolated between these two phrases cooperates in this broad cadential return to G by providing the 1 and 5 melodically on strong metric beats and by suggesting an augmented 6th chord, like the ii_9 a proper preparation for the V (Ex. 12):

Ex. 12
Aug. 6

The recapitulation returns to a state of “schwebende Tonalität,” offering G and Eb in about as equal a priority as possible. The long opening phrase of this recapitulation moves from G to Eb ; the final phrase seems to consolidate G through its emphasis on ii and V; but the G#s in measure 62 are used ambiguously, suggesting N of G and IV of the E flat which closes the melodic line in the bass with an augmented chord above that includes the 2, 5 and $\flat 2$ of G. Of course, the Eb is the -6 in G as well. A numbered, dual analysis from the perspectives of both tonal centers, Eb and G, is instructive (Ex. 13):

Ex. 13
G: 2 $\flat 2$ +3 1 7 2 -3 $\flat 7$ -6
 Eb : $\flat 5$ 4 $\flat 6$ +3 2 $\sharp 4$ 5 $\flat 2$ 1

6

One readily admires Schoenberg’s manner of balancing these two polar regions by means of the pivot tones F and A in the middle measure. F is the root degree, forming VII in G and II in Eb . We are reminded how this same root has provided passage at various times between these two tonalities, the most striking instance being the piano harmonics linking the eb oriented episode and the temporary return to G when the consequent model resumes in the exposition.

G remains the prime tonal region of Opus 11, No. 1 in spite of the “schwebende” relationship between the two tonalities. Opus 11 is decidedly tonal and to the extent that its prime tonality can even be characterized as major in mode. But both of Schoenberg’s theoretical concepts of suspended and fluctuating tonality are active structurally in Opus 11, No. 1, the latter in the expository and recapitulative sections and the former at least locally, in the central development.

Moreover, there are tonal factors operative in measures 50–52 of the central section that help define the formal function of these measures as a retransition. The tonal direction is from the Eb polar center to that of the prime tonic, G, which is confirmed on the downbeat of the recapitulation in measure 54.

The meter is to be understood as 4/4, the phrase beginning as an anacrusis on the second metrical accent. The downbeat (second beat of measure 51 or beat 1 of our interpreted 4/4) is tonally well-balanced as a pivot chord, confirming Eb but initiating a modulation toward G at the same time. This assertion can be better examined by applying our tonal degree numbering from the perspectives of both tonal centers:

Ex. 14
 Eb : $\flat 2$ 1 1 2 $\flat 7$ (-6)
(G) $\flat 2$ (+6) (-6) (7) ($\sharp 7$) (5) ($\sharp 4$) (1 4 $\sharp 7$)
 Eb : I
G: \flat VI V
(dominance of Eb degrees ends. (V of N) V)
(dominance of G degrees begins)

However, this downbeat dissonance resolves to a more neutral tonal root, F, on the weak metrical beat, midway in the circle of fifths between the Eb and the G. Its dominant seventh character is twice repeated, resolving strong beat dissonances sequentially so as to conclude with a half cadence on the V of G. Much like similar non-resolving sequences found in the tonal literature, Schoenberg's progression moves directly to its goal, although tonal harmonic implications circumscribing the circle of fifths remain (Ex. 15):

Ex. 15

There are other melodic and harmonic tonal supports in this same passage weighting at first Eb and, then more heavily, G (Ex. 16).

Ex. 16

Of course, Eb and G are closely related keys and certain intervals and melodic progressions are common to both but the harmonic implications seem clear enough to support the hypothesis of a tonal modulation being active in this retransition phrase.

One should not be too surprised to find Opus 11 exhibiting close ties to traditional tonal practices. Schoenberg, at the time of its composing, is very much concerned with tonal harmony and the published result of his concern follows two years later in *The Theory*

of *Harmony*. What is more surprising is to find tonal analysis still relevant to Schoenberg's Opus 23, No. 1, composed a dozen years later. We will apply our degree analysis to the opening section, a quasi-sentence structure and the theme of the composition.

The following examples, presented in chronological order, are the five phrases that constitute the thematic sentence: the model, its complement (only vaguely a varied repeat of the model), the reduction in two phrases, and the cadential phrase (Ex. 17):¹

Ex. 17

¹Note the tonal similarity to the opening model of Opus 11, No. 1.

The model and cadential phrases allow the most basic use of our arabic numbering system since the prime tonal center, d, is fundamental in tonally ordering the initial statement of the basic shape and also the closure of the entire theme. The third example, the first phrase of the reduction and, essentially, the beginning of the consequent, also allows our number analysis to express the prime tonality and to do so more directly than it will in the second phrase, the complement to the model, or in the second phrase of the reduction. These latter phrases are not less tonal but contain harmonic implications that are more remote, or more extended, than those of phrases 1, 3, and 5. Some information can be gained by applying the prime tonality numbering to those phrases but more local levels of analysis would be useful if a more detailed understanding of the harmony were to be gained.

However, these harmonic implications are not far removed from the extended use of tonality in the 19th century. Quick traversal of remote degrees and the direct relating of degrees from the sharp and flat side of the tonic must be taken into account as well as the easy interchange of major and minor mode. Essentially, the complement to the model presents a very acceptable harmonic progression related to d as the tonal center: the opening B emphasis moves through e and a on its way to c and then chromatically to E♭, the neapolitan of d (Ex. 18):

Ex. 18

d: VI II (IV) V VII #VII (I) N

C#, the most remote degree and root, enharmonically prepares the neapolitan. This seems a logical tonal progression for a complementary phrase and connects closely to the d that opens the following phrase.

The fact that Opus 23 is more rigorous in its counterpoint than Opus 11, No. 1 (some writers have called it a three part invention) doesn't seem to downgrade the influence of its tonal harmony, although harmonic rhythm is more dense and irregular than in Opus 11, No. 1. The keen satisfaction that one derives from its three part counterpoint, especially in this thematic sentence, can be ascribed to the logical tonal progressions of its harmony as much as to

thematic rigor and careful voice leading. Even when the theme's tonal units seem more fragmented, as in the second phrase of the reduction, they still exert strong influence on the tonal directionality of the phrase.

It is time to take into full account the tonal practices of Arnold Schoenberg in his pre-serial music. Whether consciously, or simply because the language of tonal harmony was so deeply imbedded in his own subconscious, it is evident that Schoenberg's harmonic solutions to structural problems involve practices closely associated with those of that more systematic language. It is increasingly clear that we can no longer speak only in the neutral numerology of sets, or only of thematic cells, if we wish to fully understand Schoenberg's so-called "atonal" music.

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